

Bridge Design Speed Investigation

Bridge #21 on SR 1140 (Greasy Creek Road) over Harris Creek
McDowell County



Document Prepared By:

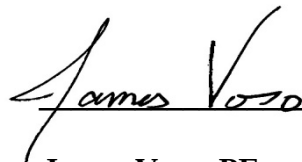
Mattern & Craig, Inc.
Consulting Engineers - Surveyors
12 Broad Street
Asheville, NC 28801
(828) 254-2201
FAX: (828) 254-4562

Commission No: 3350

July 18, 2013



Investigating Engineer


James Voso, PE

Bridge and Approach Investigation Checklist

Project 17BP.13.PE.1
Description Replace Bridge #21 on SR 1140 (Greasy Creek Road) over Harris Creek
Route SR 1140 (Greasy Creek Road)
Division 13
County McDowell

Existing Speed Limit 45 mph ☒ Posted ☐ Statutory

Reasonable & Comfortable
Passenger Car Speed 45 mph

Speed Data N/A

Ball Bank Speed Study Curve west of Bridge #21 had a ball bank indication of 10 at 45 mph.

Warning Signs at Bridge 4 Bridge End Delineators, Weight Limit (18 tons - single vehicle,
26 tons - truck tractor semitrailer)

Roadside Development Farm land in all quadrants of bridge.

ADT History 160 (2000)

Pedestrian/Bicycle Traffic None

Bridge and Approach
Digital Photos (attached)

Approach Lane Width 9'

Approach Shoulder Width: 5'
Shoulder Type grass

Lane Width (existing bridge) 9'

Shoulder width (existing bridge) 4'

Strategic Corridor / Thoroughfare
Designation and Recommended
Cross Section Not a Strategic Corridor/Thoroughfare. Two lane cross section at 45
mph based on 3R guidelines.

Crash History and
Safety Considerations No crashes reported near bridge (5/1/2003 - 4/30/2013, 10 years).

Comments Bridge number posted on bridge.

Reasonable Bridge Speed 45 mph

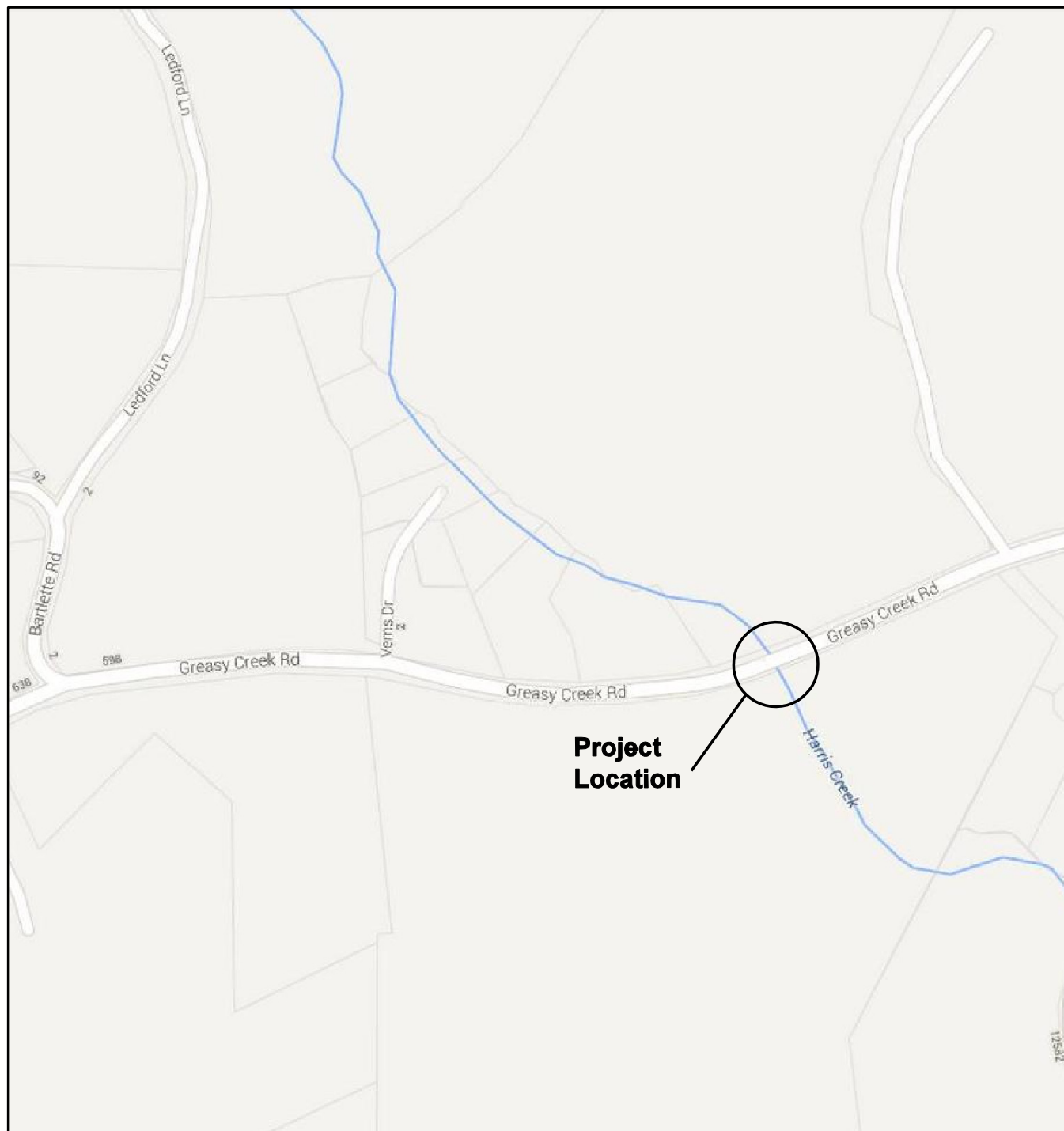
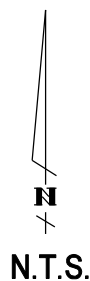
Investigated by: Mathew Bolden

Reviewed by: James Voso

Bridge #21

McDowell County

Division 13



**Project
Location**

VICINITY MAP

Bridge #21 on SR 1140
(Greasy Creek Road)
over Harris Creek



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Bridge #21
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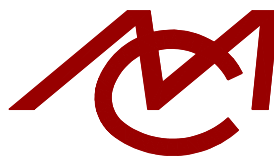


Eastbound Approach



Eastbound Approach at bridge

Bridge #21 on SR 1140
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Westbound Approach



Westbound Approach at bridge

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**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report**

Study Criteria Summary

County: MCDOWELL **City:** All and Rural
Date: 5/1/2003 to 4/30/2013 **Study:** MCDOWELLBRIDGE21
Location: SR 1140 (Greasy Creek Road) from 500 feet South of Bridge 21 to 500 feet North of Bridge 21

Report Details

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
MCDOWELLBRIDGE21				76.8	8.4	160	40001140

Request Date	Courier Service	Phone No.	Ext.	Fax No.
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County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
MCDOWELL	58	13	All and Rural		0	5/1/2003	4/30/2013	10.00

Location Text	Requestor
SR 1140 (Greasy Creek Road) from 500 feet South of Bridge 21 to 500 feet North of Bridge 21	

Fiche Roads	
Name	Code
SR 1140	40001140
GREASY CREEK	50012385

Strip Road					
Name	Code	Begin MP	End MP	Miles	Kilometers
SR 1140	40001140	1.649	1.849	0.200	0.322